



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/675,278	09/30/2003	David E. Altobelli	1062/D41	5463
2101	7590	04/05/2006	EXAMINER	
BROMBERG & SUNSTEIN LLP 125 SUMMER STREET BOSTON, MA 02110-1618			PUNNOOSE, ROY M	
			ART UNIT	PAPER NUMBER
			2877	

DATE MAILED: 04/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/675,278

Applicant(s)

ALTOBELLI ET AL.

Examiner

Roy M. Punnoose

Art Unit

2877

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13-40 is/are allowed.
- 6) ☒ Claim(s) 1, 4, 6, 7, 10, 12, 41 and 44 is/are rejected.
- 7) ☒ Claim(s) 2, 3, 5, 8, 9, 11, 42, 43 and 45 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2/04; 2/05; 3/05.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Acknowledgement is made of the Applicant's election of claim 19 received on December 07, 2005. However, after reviewing Applicant's election and the claims, it was determined that it will be best if the entire set of claims, claims 1-45, are examined together. Consequently, the Examiner has withdrawn the election/restriction requirement of the previous office action. Claims 1-45 has been examined, which is the subject matter of this office action as detailed below.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 4 recites the limitation "the first pressure" in line 1. There is insufficient antecedent basis for this limitation in the claim. Claim 4 is dependent on claim 1 and there is no reference or disclosure of a "first pressure" in claim 1. Appropriate correction is required.

4. Claim 4 recites the limitation "the second airflow" in line 2. There is insufficient antecedent basis for this limitation in the claim. Claim 4 is dependent on claim 1 and there is no reference or disclosure of a "second airflow" in claim 1. Appropriate correction is required.

5. Claim 10 recites the limitation "the first pressure" in line 1. There is insufficient antecedent basis for this limitation in the claim. Claim 10 is dependent on claim 7 and there is no reference or disclosure of a "first pressure" in claim 7. Appropriate correction is required.

Art Unit: 2877

6. Claim 10 recites the limitation "the second airflow" in line 2. There is insufficient antecedent basis for this limitation in the claim. Claim 10 is dependent on claim 7 and there is no reference or disclosure of a "second airflow" in claim 7. Appropriate correction is required.

7. Claims 4 and 10 are vague, indefinite and confusing, and therefore they have not been treated on its merits. Claims 4 and 10 will be examined if amended to overcome the rejections listed above.

Claim Rejections - 35 USC § 101

8. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

9. Claims 1, 6, 7, 12, 41 and 44 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 1 and 7 are rejected because they are claiming a non-tangible result. Claims 1 and 7 are directed to a method comprising calculating volume of an aerosol, said calculation based on signals associated with light scattering and airflow. The claims neither provide any details with respect to the nature of the claimed calculation nor does it have any tangible output. Basically they are claiming a result based on manipulation of two variables, the variables being light scattering and airflow, without disclosing any specific method of manipulation, or without providing any tangible result. Please refer to *In re Warmerdam* (CA FC) 31 USPQ2d 1754.

Claim 7 is further rejected under 35 U.S.C. 101 because it claims "a medium storing instructions" to cause a processor to carry out the method-steps of claim 1. The specification of the instant application states that the "medium includes but is not limited to, electronic, optical, ... or other storage ... devices" (see paragraph [0026]). Claim 7 is rejected under 35 U.S.C. 101

Art Unit: 2877

because the claimed medium could literally be any type of medium imaginable, from a piece of paper to the side of a wall in a building to clouds in the sky, and therefore is an open-ended limitation without any specificity.

Claims 6 and 12 are rejected for the same reasons of rejection of claims 1 and 7 above respectively because the fact that the scattering is due to diffraction does not provide any tangible result to the methods of claims 1 and 7.

Claim 41 is rejected because it is claiming a non-tangible result. Claim 41 is directed to a method comprising determining a net amount of aerosol, said determining based on signals associated with light scattering event(s) and flow rate. The claims neither provide any details with respect to the nature of the claimed determining step nor does it have any tangible output. Basically it is claiming a result based on manipulation of two variables, the variables being scattering event(s) and flow rate, without disclosing any specific method of manipulation, or without providing any tangible result. Please refer to *In re Warmerdam* (CA FC) 31 USPQ2d 1754.

Claim 44 is rejected under 35 U.S.C. 101 because it claims "a medium storing instructions" to cause a processor to carry out the method-steps recited in claim 41. The specification of the instant application states that the "medium includes but is not limited to, electronic, optical, ... or other storage ... devices" (see paragraph [0026]). Claim 44 is rejected under 35 U.S.C. 101 because the claimed medium could literally be any type of medium imaginable, from a piece of paper to the side of a wall in a building to clouds in the sky, and therefore is an open-ended limitation without any specificity.

Allowable Subject Matter

10. Claims 2-3, 5, 8-9, 11, 42-43 and 45 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims, or if the base claim is amended to overcome the rejection(s).
11. Claims 2 and 8 are allowable because, prior art of record taken alone or in combination, fails to disclose or render obvious outputting a signal associated with a comparison of the volume of the first aerosol and the volume of the second aerosol, in combination with the rest of the limitations of claims 2 and 8 respectively.
12. Claims 3, 5, 9 and 11 are allowable because they are dependent on claims 2 or 8, and they include all the allowable limitations of the parent claim(s).
13. Claim 13 is allowable because, prior art of record taken alone or in combination, fails to disclose or render obvious an apparatus comprising a detector operable to detect light originating at a light source and scattered by an aerosol, and a processor coupled to the detector configured to receive a signal associated with light scattering from a first aerosol that is associated with a first airflow and calculate a volume of the first aerosol based on the signal associated with light scattering and the first airflow, in combination with the rest of the limitations of claim 13.
14. Claims 14-18 are allowable because they are dependent on independent claims 13, or an intermediate claim, and they include all the allowable limitations of the parent claim(s).
15. Claim 19 and 26 are allowable because, prior art of record taken alone or in combination, fails to disclose or render obvious a method comprising outputting an output signal associated with a comparison between a first signal associated with light scattering from a first aerosol, and

Art Unit: 2877

a second signal associated with light scattering from a second aerosol, in combination with the rest of the limitations of claims 19 and 26 respectively.

16. Claims 20-25 and 27-32 are allowable because they are dependent on independent claims 19 or, 26, or an intermediate claim, and they include all the allowable limitations of the parent claim(s).

17. Claim 33 is allowable because, prior art of record taken alone or in combination, fails to disclose or render obvious an apparatus comprising a processor coupled to the detector, the processor configured to receive a first signal associated with light scattering from a first aerosol and a second signal associated with light scattering from a second aerosol and output an output signal associated with a comparison between the first signal and the second signal, in combination with the rest of the limitations of claim 33.

18. Claims 34-40 are allowable because they are dependent on independent claims 33, or an intermediate claim, and they include all the allowable limitations of the parent claim(s).

19. Claims 42-43 and 45 are allowable because, prior art of record taken alone or in combination, fails to disclose or render obvious a method comprising outputting an output signal including information for metering a third aerosol or fluid.

Contact/Status Information

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Roy M. Punnoose** whose telephone number is **571-272-2427**.

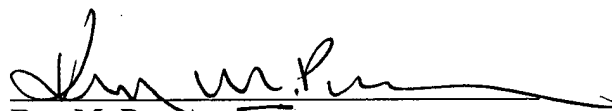
The examiner can normally be reached on 9:00 AM - 5:30 PM.

Art Unit: 2877

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Gregory J. Toatley, Jr.** can be reached on **571-272-2800 ext.77**. The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

April 03, 2006


Roy M. Punnoose
Patent Examiner
Art Unit 2877